

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. .... 10/706,345  
Inventorship ..... Chimitt et al.  
Filing Date ..... November 12, 2003  
Assignee ..... Unisys Corporation  
Art Unit ..... 2182  
Examiner ..... Il Woo Park  
Docket No. .... TN313  
Confirmation No. .... 6037  
Title: METHOD AND SYSTEM FOR PROCESSING INPUT/PUTPUT  
REQUESTS DIRECTED TO A VIRTUAL DATA VOLUME

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop: After Final (AF)  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Claims 1-5, 7, 9, 11, 12, 14-16, and 18-25 are currently pending in this application. Claims 1, 2, 4, 5, 7-9, 11-14, 16, and 18-25 stand rejected under 35 U.S.C. §112 as failing to comply with the written description requirement. Claims 1, 2, 4, 5, 7-9, 11-14, 16, and 18-25 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0158836 to Venkatesh et al. (hereinafter "Venkatesh"). Claims 1, 2, 4, 5, 7-9, 11-14, 16, and 18-25 stand rejected under 35 U.S.C. §112 as failing to comply with the written description requirement. The Examiner asserts this rejection by reciting that "[t]he Specification does not include "before the IRP reaches a file system associated with the IRP." See Office Action in ¶ 3 at p. 2.

The Applicant respectfully points the Examiner to the following paragraph on p. 7 of the Specification:

It is important to note that the volume filter preferably is software written specifically to implement the present invention i.e., logically combine Basic Volumes, referred to as extents, so

that any number of Basic Volumes possibly located on separate disks may appear and be presented to users as a single Data Volume, as explained herein. As mentioned, the volume filter is conceptually above the Basic Volumes so that IRPs are processed by the volume filter **prior to being processed** by the Basic Volume Manager. The volume filter is incorporated into the operating system and only the I/O manager is aware that it is there. That is, I/O originators think they are talking to a single Basic Volume and are not aware that their I/O may be redirected according to the logic of a particular Data Volume. (Emphasis Added).

The Applicants maintain that processing the IRP BEFORE REACHING A FILE SYSTEM to be described when the IRP is processed PRIOR to being processed by the Basic Volume Manager. As such, withdrawal of the rejection is requested. If the Examiner does not agree with this interpretation by the Applicants, the Applicants invite the Examiner to contact the undersigned attorney for the Applicants to determine claim language that the Examiner believes is acceptable to the Examiner.

Claims 1, 2, 4, 5, 7-9, 11-14, 16, and 18-25 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0158836 to Venkatesh et al. (hereinafter "Venkatesh"). Claim 1, which is representative of the independent claims 9, 14, and 23, recites intercepting an initial IRP before the IRP reaches a file system associated with the IRP and implementing the method above a Basic Volume Manager.

The Examiner interprets the "volume filter" of claim 1 as a "data mover" in Venkatesh. Applicants respectfully disagree for the following reasons. To intercept an IRP before it is received by an associated file system and to implement the volume filter above a Basic Volume Manager, the volume filter would need to be implemented outside of the native operating system. For example, the volume filter could be implemented as a driver and would need to communicate to the operating system through some mechanism like an I/O manager.

Venkatesh's data movers are computers (paragraph 0054; "Each of the data movers 115, 116, 117 is a high-end commodity computer") implemented as part of a distributed network's file server (paragraph 0010, Figure 9). The claimed volume filters are distinguishable from the data movers of Venkatesh, in that a high-end commodity computer could not be implemented above a Basic Volume Manager, nor could it intercept an input/output request packet before it is received by the associated file system. Figure 9 illustrates that the file system (144) is part of the data mover (115). The data mover cannot act independently of the file system in Figure 9, and therefore cannot perform the functions of the claimed volume filters. Even if it were interpreted that software implemented and replicated on each data mover computer of Venkatesh was equivalent to the claimed volume filter, Venkatesh recites that a request is forwarded to the data mover from the meta file system manager.

Software implemented in Venkatesh's data movers does not intercept IRPs before they are received by the associated file system. Venkatesh describes three file systems, and their respective relation to the meta file system manager. In paragraph 0061, describing the network file system (NFS), a client makes a request for access to a file.

"A client first issues an NFS lookup request including a path to a file and the filename for the file to be accessed. The lookup request returns a file handle for a file entry corresponding to the file. The client uses the file handle in subsequent requests for access to the file. These subsequent request are interpreted by the NFS routines 141 and forwarded to the meta file system manager 146." (emphasis added).

Clearly, the NFS accesses the request before the meta file system manager. Paragraph 0062 describes the operation under the Common Internet File System (CIFS). "The CIFS server routines 142 receive the CIFS request from the client and forward the request through the Virtual File System (VFS) to the meta file system manager 146." Again, the CIFS accesses the request before the meta file system manager and the VFS. A similar scenario describing the UNIX file system (UxFS) is described in paragraph 0074.

Venkatesh does not disclose a volume filter as claimed. Venkatesh does not disclose intercepting an input/output request packet before it reaches the associated file system. Venkatesh does not disclose implementing a meta file system above a Basic Volume Manager as claimed. Therefore, claim 1 is patentable over Venkatesh for the reasons presented above.

The Applicants made these arguments in **the prior Amendment** in response to an Office Action. In the Action dated September 29, 2008, the Examiner restates these same rejections and then fails to respond to the Applicants' arguments in any way. The Applicants do not understand how the Examiner expects them to respond to these rejections when the Examiner has not stated anything more than what was stated before. In the MPEP § 706.07, the Examiner is instructed as follows:

Before final rejection is in order a clear issue should be developed between the examiner and applicant. To bring the prosecution to as speedy conclusion as possible and at the same time to deal justly by both the applicant and the public, the invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied; and in reply to this action the applicant should amend with a view to avoiding all the grounds of rejection and objection. Switching from one subject matter to another in the claims presented by applicant in successive amendments, or from one set of references to another by the examiner in rejecting in successive actions claims of substantially the same subject matter, will alike tend to defeat attaining the goal of reaching a clearly defined issue for an early termination, i.e., either an allowance of the application or a final rejection.

While the rules no longer give to an applicant the right to "amend as often as the examiner presents new references or reasons for rejection," present practice does not sanction hasty and ill-considered final rejections. The applicant who is seeking to define his or her invention in claims that will give him or her the patent protection to which he or she is justly entitled should receive the cooperation of the examiner to that end, and not be prematurely cut off in the prosecution of his or her application. But the applicant who dallies in the prosecution of his or her application, resorting to technical or other obvious subterfuges in order to keep the application pending before the primary examiner, can no longer find a refuge in the rules to ward off a final rejection.

The examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal. However, it is to the interest of the applicants as a class as well as to that of the public that prosecution of an application be confined to as few actions as is consistent with a thorough consideration of its merits.

Neither the statutes nor the Rules of Practice confer any right on an applicant to an extended prosecution; *Ex parte Hoogendam*, 1939 C.D. 3, 499 O.G.3, 40 USPQ 389 (Comm'r Pat. 1939).

### STATEMENT OF GROUNDS

In making the final rejection, all outstanding grounds of rejection of record should be carefully reviewed, and any such grounds relied on in the final rejection should be reiterated. They must also be clearly developed to such an extent that applicant may readily judge the advisability of an appeal unless a single previous Office action contains a complete statement supporting the rejection.

However, where a single previous Office action contains a complete statement of a ground of rejection, the final rejection may refer to such a statement and **also should include a rebuttal of any arguments** raised in the applicant's reply. If appeal is taken in such a case, the examiner's answer should contain a complete statement of the examiner's position. The final rejection letter should conclude with Form Paragraph 7.39. (Emphasis added).

The Applicants respectfully request that the Examiner provide a proper response to the Applicants' arguments to permit Applicants to respond in a matter that either moves the issues forward and/or properly frames the issue for an appeal.

### Conclusion

Claims 1-5, 7, 9, 11, 12, 14-16, and 18-25 are currently pending in this application. Applicants have on more than one occasion now made arguments with respect to the pending rejection of this case in which the Examiner has failed to adequately respond.

For example, the rejection under 35 U.S.C. 112 rejecting “intercepting an initial IPR before the IRP reaches a file system” by quoting the Specification (as is done above) how an IRP is intercepted and “processed by the volume filter prior to being processed by the Basic Volume Manager.” In spite of this quote, the Examiner continues to assert that the limitation does not “include before the IRP reaches a file system.” Additionally, the examiner asserts that the “[s]pecification does not disclose a file system.” Because the invention relates to creating Data Volumes for storage of data above basic storage volumes such as are implemented within a Microsoft Windows operating system (see Specification at pp.6-7 for example), the Applicants have no way to respond to this argument. Simply stated the Examiner is both factually and logically wrong.

Similar arguments with respect to the characterization and application of the prior art are made as noted above. The Examiner has failed to respond to Applicants’ arguments in multiple rejections.

Applicant respectfully requests this panel to reconsider and issue the subject application. If any issues remain that preclude issuance of this application, the Examiner is again urged to contact the undersigned attorney.

Respectfully submitted,

**Chimitt et al.**

Dated: November 9, 2009

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